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ABSTRACT

Twenty-three matched pairs of high-school students with mental retardation who obtained gainful employment were compared. One member of each pair remained successfully placed for at least 6 months, and the other did not. By selecting pairs from model programs under the transition-from-secondary-education initiative of the U.S. Office of Special Education and Rehabilitative Services, a broad national sample from high-school placement programs was obtained. Case study questionnaires were completed by students' placement counselors, trainers, or supervisors. Results indicated that students succeed in a variety of positions and communities across the nation. The most important elements contributing to this success are student motivation, placement team effort, employer support, and on-the-job supervision. (Author/DB)

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A Comparison of Successful and Unsuccessful Placements of Secondary Students with Mental Handicaps into Competitive Employment

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Abstract

Twenty-three matched pairs of high school students with mental retardation who obtained gainful employment were compared. One member of each pair remained successfully placed for at least six months, and the other did not. Matched pairs were obtained from model programs funded under the transition-from-secondary-education initiative of the U.S. Office of Special Education and Rehabilitative Services (P.L. 98-199). Case study questionnaires were completed by students' placement counselors, trainers, or supervisors. The results indicated that students succeed in a variety of positions and communities across the nation. The most important elements contributing to this success are student motivation, placement team effort, employer support, and on-the-job supervision.

A Comparison of Successful and Unsuccessful Placements of Secondary Students with Mental Handicaps into Competitive Employment

One of the economic facts of life in the United States is that minorities tend to be discriminated against in the labor market. Both employment rates and wages are lower for minorities than for the population at large. These facts hold for women (Komarovsky, 1973), Blacks and Hispanics (Cain, 1984, U.S. Department of Labor, 1982), and immigrant Southeast Asians (Hirschman & Wong, 1981). Similarly, many individuals with mental retardation are either unemployed or underemployed. Indeed, the U. S. Commission on Civil Rights (1983) reported that 50 to 75% of adults with handicaps in the United States are unemployed. Although this figure may be exaggerated (cf. Conley, 1973), the fact remains that a large number of individuals with mental retardation are not encouraged to contribute to their own economic independence nor to fulfill societal expectations for employment.

Loss of human resources and individual stories of unfulfilled promises prompted Will (1984) to encourage development of transition services from secondary schools to community settings throughout the United States. To date, more than 200 model programs have been funded by the Office of Special Education and Rehabilitative Services (OSERS) to stimulate the development of model programs that focus upon improved training toward employment for high school students. These projects vary broadly. They have three general thrusts: a) to train developmentally disabled secondary students for transition to post-school home, community, and employment settings; b) to develop models for the inter-agency agreements necessary to assure that these students make a smooth transition from school to post-school settings; and

c) to provide formal post-secondary school education for those who can benefit from it. About half the projects either placed students into competitive employment or had a close relationship with a secondary school that made such placements.

The present project was completed to capitalize on the unique opportunity provided by having so many diverse projects that could provide information on a common, socially critical outcome--placement of mentally handicapped students into competitive employment by secondary school special education programs. The study design thus included a broad national sample of high school placement programs. The experimental design was simple but elegant. Projects that participated in the study were asked to select a student from their model program who had been successfully employed and to match him or her with a very similar student who had been terminated from an employment site. These pairs of students were compared in order to identify variables that appeared to influence the successful transition from secondary special education school to competitive employment.

Method

The study compared the case histories of pairs of high school students with mental retardation who had been placed into competitive employment. One student in each pair had been successfully employed for at least six months; the second student had lost his or her job within this same time period. A matched pairs analysis controlled for many student characteristics and training conditions, and focused on other variables (personal and environmental) which may have contributed to employment success or failure.

Sampling

Recruiting letters (each of which included a stamped, self-addressed return envelope and a one-page agreement-to-participate questionnaire) were

mailed to 112 project directors in February 1986, and to 29 newly funded model programs in April 1987. About 80 of these 141 projects placed students. These submitted 29 pairs of cases. Upon review of the case study checklists, 24 of the 29 pairs of cases from 17 different projects met the criteria for inclusion. Five pairs of cases were not included for the following reasons: one successful student worked only 2 months; another worked for only $1.70 per hour; two unsuccessful students worked more than six months before losing their jobs; and a third was never placed.

Procedure

In February 1986, and again in April 1987, project directors were asked to participate in this case study project. Those who placed students into competitive employment and expressed an interest in participating in the study were sent a packet containing instructions and a case study checklist. The project director was asked to complete case studies on each of a pair of students who had been matched as closely as possible for gender, age, and general ability with regard to attaining and maintaining employment. The subjects were matched for these variables in order to control (neutralize) the influence of these variables on the outcome of the placements and thereby to emphasize characteristics of the individual and the placement site that were critical for success. Although closely matched, students of each pair were to differ in that one was to have been successfully placed into competitive employment and the other was not. "Success" was defined as paid employment for at least 10 hours a week at minimum wage or better, funded by the employer, and lasting at least six months. Each case study was to be completed by a project employee who knew the student well.

Instrument: Case Study Checklist

Each case study was based on a two-page set of instructions and an eleven-page case study checklist. The checklist format was used in favor of open-ended questions or case-study essays, in order to maximize the number of cases having complete data. Open ended questions result in substantial underrepresenting (Belson, 1986) in that people often fail to recall information that has not been prompted. In addition we reasoned that the transformation of subjective information into objective data is more validly done by the individual who knows the subject, i.e., the respondent, than by a research assistant who has only a brief narrative description from which to make transformation judgments.

The checklist contained five sections. Section A focused on student characteristics, such as age, gender, ethnicity, adaptive and maladaptive behavior, educational history, employment history, and personal advantages (e.g., talents, family support) or disadvantages aside from any handicaps. Section B focused on the student's current housing and daytime services, the neighborhood environment, and the type of community, especially its economic characteristics. Section C addressed model program training and employment characteristics. Also featured was an analysis of the influence played by program personnel in the training and placement process. Section D included an analysis of the type of support that was offered to the target employee after placement, including an analysis of incentives and disincentives. Section E included a summary of the placement and reasons for success or failure.

Characteristics of Participating Projects

A total of 17 model programs completed case studies on 23 matched pairs. These 17 projects were located in 10 states and the District of Columbia, including Arizona, California, Illinois, Maryland, Minnesota,

Missouri, New Mexico, New York, Oregon, and Virginia. Eight of the 17 model programs were located in cities, seven of which had populations of 100,000 or more. The other nine model programs spanned at least part of a county, and two model programs spanned more than one state.

Model programs represented various types of service agencies, including nine secondary schools or local education agencies, five community colleges or universities, a community education rehabilitation agency, a state agency, and several private nonprofit agencies.

These 17 model programs dealt directly with a variety of individuals including parents, agency personnel, business employees, teachers, and project staff. An average of 178 students were reported to be directly impacted (range of 24 to 800), and an average of 261 students were reported to be either directly or indirectly impacted (range of 0 to 1,245).

More than 75% of the model programs reported written objectives that focused upon assessing students, placing students into competitive employment, providing vocational training or counseling, providing post-employment support, and training employment-related staff. Thirteen of the model programs reported serving students with learning disabilities and mental retardation. Besides these two handicaps, only physical impairments were targeted by more than half of the 17 responding model programs.

Responses to a question about the local placement community indicated that education, retail, and service industries were more prevalent than manufacturing and wholesale businesses, and that agriculture, construction, and government were not well represented in the local placement community.

Description of Students Involved in Case Studies

All students included in this secondary special education study were mentally retarded. Ability levels, based on the American Association on

Mental Retardation classification system (1984), reported for 12 pairs, ranged from severe to borderline mental retardation. The two members of a pair were always matched on respondents' judgments of their overall work skills.

Insert Table 1 about here

Table 1 reports the means and standard deviations for age, education, years of special and regular education, and neighborhood quality ratings of successful and unsuccessful students as well as the frequencies for gender and ethnicity.

The adequacy of matching is supported by *t*-tests and χ^2 tests for paired samples. Successful and unsuccessful students did not differ on any of the variables used to match them. Furthermore, students' training programs, home environments, and day activities reflected no significant differences. Also, because each matched pair came from the same model program, its members were similar on a broad array of socioeconomic and experiential characteristics. In short, members of each pair were extremely well matched.

Results

Placements and Decisions

Table 2 displays job placement types for the 23 pairs of successfully placed and unsuccessfully placed students for whom data were complete. These profiles were surprisingly similar for the two groups of subjects. Although the numbers were too small to reach statistical significance, it is interesting to note that all three placements in school settings (nursery, school, and preschool categories) were unsuccessful, whereas the two

placements in health-related and the two in automotive (service station) settings were successful.

Insert Table 2 about here

Table 3 shows the percentage of total influence attributed by the respondents to each of several change agents in the training and placement process for the successful and unsuccessful placements. The profiles of influence were similar for both groups. Looking across both successful and unsuccessful placements, preplacement training was attributed 16.50% and 17.04%, respectively, to the total influence. In both groups, counseling and training during placement together accounted for about a third of the total influence. The on-the-job supervisor and the employer, taken together, were given credit for about 12 to 14% of the total influence in the training and placement process. One might question the balance that attributes more than 50% of the influence to the transition education agency (preplacement training, counseling, and training during placement) and less than 15% to the employer (on-the-job supervisor and employer), because eventually support for the placement is presumably transferred to the employer from the transition agency during the transition process. Another point of interest in Table 3 is the substantial influence of the family of the successful students (10.2%).

Insert Table 3 about here

Comparison of Successful and Unsuccessful Cases

Tables 4 through 6 report the results of efforts to determine why one student is successful and another unsuccessful. Table 4 shows the percentage of support attributed to each of the contributors in placement success for the 22 cases on whom data were complete. As with Table 3, the most striking feature of this table is the similarity of the two profiles. The highest attributions are to transition agency follow-up and supervisor on the job (32.7% for successful, 46.5% for unsuccessful). Fairly high attribution is also made to student ability, especially for those who were successful (19.8% vs. 11.7%). Despite the similar profiles for successful and unsuccessful cases, the respondents were willing to attribute only about 2% of the success to luck.

Notwithstanding these similarities, there were statistically significant differences in attributions of support for the successful versus unsuccessful students in three areas. Significantly more support was attributed to both student ability and job match for successful placements, but significantly more support was attributed to transition agency follow-up for unsuccessful placements. This combination of supports suggests that extra staff time is spent in follow-up efforts for the more problematic placements.

Insert Table 4 about here

Table 5 reports the respondents' ratings of students' attitudes and performance difficulties in their job placements. There are clear differences in these ratings. Students in successful placements were rated as having fewer negative and more positive attitudes than their peers in unsuccessful placements ($p < .05$, Fisher's Exact Test). Successful students

had far fewer performance difficulties than their unsuccessful peers. In the unsuccessful group, performance difficulties were associated with attitude almost as frequently as ability.

Insert Table 5 about here

Table 6 shows the reasons for placement success or failure given by the respondents. When they were asked the question directly, respondents had very clear ideas about why placements succeeded or failed. A significantly higher proportion of the successful student work placements were seen to have good support, a good student attitude, a good job match, a creative placement specialist, supportive co-workers, a team effort by those involved at school and at work, and a supportive employer or job supervisor. It is also interesting to note that respondents were far more willing to give reasons for success than they were to give reasons for failure. The 23 successful cases each had an average of five reasons for success, whereas the 23 unsuccessful cases each had fewer than two reasons listed for their failure.

Insert Table 6 about here

Benefits of Placement

Finally, Table 7 shows the benefits of placement for both successful and unsuccessful cases. As with the reasons for success, respondents were far more likely to list benefits for successful students (N=90) than for unsuccessful students (N=42). In terms of statistical significance, the successful placements were associated with the following benefits: a) transi-

tion agency's chances for more job placements, b) permanent long-term employment for the student, and c) increased student independence. Gains in self-confidence and positive work experiences were also cited as benefits of successful job placement.

Insert Table 7 about here

Discussion

The present study was undertaken to identify factors associated with successful employment of high school students with mental handicaps as perceived by transition project staff. Several findings of this research are noteworthy. First, student attitude appears to have been perceived as a more important ingredient in successful employment than student ability. Both the within-pair student differences (Table 5) and the "reasons for success and failure" (Table 6) indicated that student attitude differed significantly in successful and unsuccessful students. This finding is consistent with a large literature, recently reviewed by Greenspan and Shoultz (1981). Second, the match of the student to the job was noted as important in both the "sources of support" (Table 4) and "reasons for success or failure" (Table 6). Although many have argued that such a match is important (Martin, 1986), the argument is rarely supported by empirical evidence. Third, there was an apparent inconsistency among the four tables 3 through 6 dealing with reasons for placement success. These Tables reiterate the well-known phenomenon that slight differences in question wording and format can produce dramatic differences in results (Andrews & Withey, 1976; Belson, 1986; Sudman & Bradburn, 1974). For example Table 4, "sources of support," had a very different profile of responses from Table

6, "reasons for success or failure." While Transition agency effort on behalf of unsuccessful cases (27.5%, vs. 16.6% for successful cases) was a salient feature of Table 4, parallel items ("good (inadequate) support [follow-up]" and "creative, persistent placement specialist" were seen to be major reasons for placement success in Table 6. Clearly, respondents saw effort on students' behalf and reasons for students' success to be substantively different questions. Similarly, Table 3 ("Placement influences") can be interpreted as evidence that pairs were matched on a variety of service, home, and environmental supports, whereas Table 4 ("sources of support") reports the efforts that were focused on placement. Finally, Table 5 focused student characteristics, which had been called both a source of placement support (Table 4) and a reason for placement success (Table 6), in what looks suspiciously like a "blame the victim" disposition by the respondents. This refinement indicated that the attitude outweighed ability as a factor in placement success--not an especially surprising result, since pairs had been specifically matched on ability but not on attitude.

The comparison of successful and unsuccessful student job placements reported in this paper is the result of a unique opportunity to analyze several distinct, yet parallel data bases across the United States. Despite the broad range of projects sampled, several threats to both external and internal validity were inherent in the research design. External validity was threatened by the small unsystematically drawn sample (N = 17) of volunteer projects from those that were available (N = 80). One would suspect that the respondent agencies were larger, better organized, and more successful than nonrespondents. Internal validity was threatened matching constraints. Because matching of successful and unsuccessful was so complete--pairs being matched on age, ability, communities, and

programs--many of the more powerful predictors of placement success may have been matched out of the investigation. This is the same flaw that invalidates an analysis of covariance when the control variable (covariate) is highly correlated with the intervention (e.g., when the investigation individualizes interventions so they meet the student at his or her ability level and then covaries on IA). Nevertheless, many variables were free to vary in this study, placing it in a position of being able to detect the more subtle, often unnoticed differences between successful and unsuccessful placements with a great deal of experimental power.

In summary, results of this study indicate that model programs are succeeding in placing students in a variety of communities across the nation. The most important elements in this success appear to be team effort, involving a solid and energetic transition education staff as well as employer support and employment supervision, and a sensitive match of the student and the job. The effort of the transition team appear to be about five times that of employer. These findings are particularly worthy of additional research because they suggest that actual placements based upon systematically developed objectives and a good job match may facilitate successful transition from school to work by an increasing number of high school students with disabilities.

Author Notes

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Table 1.

Characteristics of Successful and Unsuccessful Students

Placements:	Successful			Unsuccessful			
	N	M	SD	N	M	SD	t^a
Age	23	21.91	5.53	23	22.48	5.52	.49
Years of School							
Special	11	11.00	4.80	11	10.63	5.04	.45
Regular	12	2.42	3.75	12	1.58	3.29	1.05
Neighborhood ratings	22	3.45	1.74	22	3.32	1.62	.18
Ethnicity	N			N			χ^{2a}
Black	6			6			1.11
Hispanic	3			3			
Caucasian	14			13			
Sex							
Female	10			13			.55
Male	13			10			

[a]Successful and unsuccessful cases did not differ significantly on any of the tabled variables, $p < .2$, two tailed

Table 2.

Job Placements of Successfully and Unsuccessfully Placed Students (n=23 pairs)[a]

	Successful	Unsuccessful
Food Service	9	8
Health-related	2	0
Automotive	2	0
Hotel/Motel	4	5
Office	0	2
Manufacturing	1	0
Nursery	0	1
School	0	1
Preschool	0	1
Clothing (stock person)	0	1
Several named	3	2
Not reported	2	2
Total	23	23

[a]Entries represent responses to the following questions:

1986, Question E4: "John was selected for placement at _____."

1987, Question E5: "Describe the job on which _____ was placed."

Table 3.

Percentage of Influence Attributed by Respondents to Each of the Agents in the Training and Placement Program (n=22 pairs)

Agent	Placement				
	Successful		Unsuccessful		
	Mean	SD	Mean	SD	t[a]
Intake	6.36	7.74	6.36	7.59	0
Preplacement Training	16.50	11.75	17.04	14.61	.19
Counseling during Placement	16.59	17.16	14.23	12.34	.74
Trainer(s)	17.45	17.58	19.64	17.70	-.69
Supervisor	3.64	7.27	5.91	10.54	-1.12
Board	.54	1.50	.45	1.47	1.00
Family	12.23	10.47	8.18	8.67	1.65
Advocate	3.04	4.10	3.32	5.42	-.33
Medical doctors	4.54	7.61	3.64	6.76	.70
Community services	0	0	1.82	5.88	-1.45
Group home	.91	4.26	1.14	3.76	-.44
Community college instr.	1.00	3.25	1.36	3.51	-.78
High school admin.	1.82	8.53	.09	.43	.95
Employer	7.68	11.78	8.41	13.04	.22
Transition team	2.95	7.66	3.86	9.50	-.62
Other	4.73	11.27	4.54	12.14	-
	100.00		100.00		

[a] $df = 21$, $t_{.05} = 2.08$, two-tailed; no difference was statistically significant.

Table 4.

Percentage of Support Attributed by Respondents to Each of the Contributors to Placement Success or Failure (n=22 pairs)

Source of support	Placement				
	Successful		Unsuccessful		
	Mean	SD	Mean	SD	t[a]
Student's ability	19.77	12.00	11.73	12.74	2.52*
Peers on the job	6.86	7.45	5.45	8.15	.70
Supervisor on the job	16.14	9.12	18.95	14.97	-.96
Transition agency follow-up	16.59	13.49	27.50	25.11	-2.72*
Family support	8.18	9.20	11.14	10.68	-1.08
Match to job	13.41	8.22	4.77	6.26	3.57*
Luck	2.27	4.56	.91	2.50	1.37
Personnel at work site	3.50	5.60	2.27	4.81	.75
Personnel at transition agency	4.27	6.64	6.14	12.81	-.88
Group home house parents	-	-	.45	2.13	-1.00
School counselor	-	-	.91	4.26	-1.00
School principal	1.36	4.68	1.14	5.33	.15
Behavior program	1.36	3.84	1.59	3.58	-.19
Other	6.27	10.16	7.04	13.68	
	100.00		100.00		

[a] $df = 21$, $t_{.05} = 2.08$, two-tailed

* $p < .05$

Table 5.

Ratings of Students' Attitudes and Performance Difficulties (n=24 pairs)[a]

	Placement	
	Successful	Unsuccessful
Attitude Ratings		
Poor*	0	8
Neutral	1	1
Positive*	10	3
None reported	13	12
	24	24
Performance Difficulties		
Job conditions	1	2
Attitude*	1	8
Social skills	3	1
Making decisions	0	1
Production rate	4	6
Production quality	0	2
No opportunity (Aborted Placement)	-	1
Other problems	-	2
Total Number of Problems*	9	21

[a]1986, Question E5: On the job, John _____.
1987, Question E7: Describe _____'s performance on the job regarding his/her assigned tasks.
1987, Question E8: Describe _____'s attitude on the job.

*$p < .05$ by a Fisher Exact Probability Test

Table 6.

Perceived Reasons for Placement Success or Failure (n=23 pairs)[a]

	Successful	Unsuccessful
Support (interference) from home	11	6
Good (inadequate) support [follow-up]*	15	5
Good (poor) student attitude*	18	8
Good (poor) student ability	11	5
Shortage of business	0	1
Good (poor) job match*	13	3
Qualified for SSDI	0	2
Job schedule changed	0	1
Creative, persistent placement specialist*	8	1
Employers incentive	7	1
Supportive co-workers*	9	1
Team effort*	9	0
Supportive employer and/or supervisor*	16	1
No reason given	1	0
Total number of reasons listed	118	35

[a]1986 Question E8; 1987 Question E10: "The placement has (succeeded, failed) because _____."

*$p < .05$ by a one-tailed Fisher Exact Probability Test.

Table 7.

Perceived Benefits of Placement (n=23 pairs)[a]

	Placement	
	Successful	Unsuccessful
Improved agency's chances for more placements*	13	3
Permanent, long-term, employment*	11	1
Increased revenue	9	5
Independence for the student*	15	3
Improved student self-concept	13	8
Experience, learning self-confidence*	15	7
Enjoyable experience for the student*	9	3
A chance to prove worthiness, to assess abilities	11	9
Other benefits	3	3
Total number of benefits listed	90	42

[a]1986, Question E6; 1987, Question E9: "The benefits of placement have been _____."

*$p < .05$ by a Fisher Exact Probability Test